

DETAILED ACTION

Allowable Subject Matter

1. Claims 59, 60, 66 and 70 allowed.
2. The following is an examiner's statement of reasons for allowance: Claims 59 and 60 were previously allowed.

Claims 66 and 70 are allowable because the prior art does not teach a mass spectrometer or mass spectrometric method wherein an attenuating means is given two modes of operation characterized by two different mark space ratios, such that the two modes of operation provide different average fluxes of ions exiting the means for attenuating.

3. Smith teaches two TOF mass spectrometers, each with a different mark space ratio, but the mark space ratio is constant for each of the spectrometers. This is because the deflector 122 does not alternately block ions, but rather alternates between sending ions to one TOF stage or the other, thereby giving one TOF a duty cycle of 99% and the other a duty cycle of 1%.
4. U.S. Patent 5,347,126 discloses an ion scattering spectrometer wherein the beam to be irradiated on the sample is pulsed by pulsing sections 14 and 16 with a variable pulse duration and interval (equivalent to a variable mark space ratio); however, this beam is not passed into a mass spectrometer, but rather is pulsed onto a sample for secondary ion spectroscopy. Further, there is no teaching that the variable mark space ratio results in a varied average ion flux.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL MASKELL whose telephone number is (571)270-3210. The examiner can normally be reached on Monday-Friday 8AM-5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Kim can be reached on 571/272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Maskell/

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Examiner, Art Unit 2881

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/David A Vanore/

Primary Examiner, Art Unit 2881